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10/825,450	04/14/2004	Kathleen M. Carmichael	D/A2533	8333

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EXAMINER	
DOTE, JANIS L	

ART UNIT	PAPER NUMBER
1756	

DATE MAILED: 05/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/825,450	CARMICHAEL ET AL.	
	Examiner	Art Unit	
	Janis L. Dote	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 17-20* is/are rejected.

7)☒ Claim(s) *15 and 16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 February 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The examiner acknowledges the amendments to claims 1, 19, and 20 set forth in the amendment filed on Feb. 28, 2006. Claims 1-20 are pending.

2. The replacement drawing sheet for Fig. 3 received on Feb. 28, 2006, is acceptable.

3. The objection to the drawings set forth in the office action mailed on Dec. 16, 2005, paragraph 1, has been withdrawn in response to the replacement drawing sheet filed on Feb. 28, 2006.

The objections to the specification set forth in the office action mailed on Dec. 16, 2005, paragraph 2, items (1) and (2), have been withdrawn in response to the amended paragraphs 0001 and 0022 of the specification set forth in the amendment filed on Feb. 28, 2006.

The rejections of claims 1-20 under 35 U.S.C. 112, second and first paragraphs, set forth in the office action mailed on Dec. 16, 2005, paragraphs 4 and 6, have been withdrawn in response to the amendments to claims 1, 19, and 20 set forth in the amendment filed on Feb. 28, 2006.

The terminal disclaimer filed on Feb. 28, 2006, disclaiming the terminal portion of any patent granted on this application

which would extend beyond the expiration date of copending US application serial no. 10/824,794 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Accordingly, the rejection of claim 20 under the ground of nonstatutory obviousness-type double patenting over claims 19 and 20 of copending Application No. 10/824,794 set forth in the office action mailed on Dec. 16, 2005, paragraph 13, has been withdrawn.

4. The amendment filed on Feb. 28, 2006, is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The amended paragraph 0022 adds the phrase "a drelt is a cross between a drum and a belt and is a belt formed over a drum." The originally filed specification did not define the term "drelt." See the originally filed specification, page 7, paragraph 0022, line 8.

Applicants assert that the term "drelt" is well known in the art. However, applicants have not provide any objective evidence, e.g., a dictionary or standard textbook, to show that

the term "delt" has the definition now stated in amended paragraph 0022.

Applicants are required to cancel the new matter in the reply to this Office Action.

5. The disclosure is objected to because of the following informalities:

The use of trademarks, e.g., Mor-Ester 49,000 [sic: MOR-ESTER 49,000] in paragraph 0074, line 3, has been noted in this application. The trademarks should be capitalized wherever they appear and be accompanied by the generic terminology. This example is not exhaustive. Applicants should review the entire specification for compliance.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Appropriate correction is required.

Applicants' arguments filed on Feb. 28, 2006, have been fully considered but they are not persuasive.

Applicants assert that the spelling of the term "Mor-Ester" is correct.

However, the trademark "Mor-Ester" was not objected to because it was mis-spelled, but that the trademark was not capitalized, e.g., MOR-ESTER. Applicants' amendment to the specification did not capitalize all of the trademarks disclosed in the specification. Accordingly, the objection stands.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1-11, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,382,486 (Yu'486), as evidenced by applicants' admissions in paragraph 0078 of the instant specification (applicants' admission I) and US 5,021,309 (Yu'309), combined with US 6,932,921 B2 (Service) and US 6,764,617 B1 (Viswanathan).

The Service disclosure relied on for the rejection has an effective filing date of Jan. 6, 2003, as evidenced by provisional application 60/438,171 (Application'171), of which Service claims the benefit of priority.

Yu'486 discloses a photoreceptive imaging web member comprising a flexible substrate having thereon in order, a

conductive layer, a charge generation layer, and a charge transport layer. The imaging member further comprises a conductive anti-curl layer on the flexible substrate on the side opposite to the charge generation layer and the charge transport layer. See col. 6, lines 43-49; col. 17, line 27, to col. 19, line 2; and example IV at col. 19. The anti-curl layer had a layer thickness of 14 μm, which meets the layer thickness range of about 5 to about 60 μm recited in instant claim 17. The anti-curl layer comprises 23 wt% of a conductive polymer dispersion and 75 wt% of a polymer blend, which comprises 92 parts by weight of a polycarbonate resin associated with trademark MAKROLON 5707 from Bayer AG and 8 parts by weight of a polyester resin associated with the trademark VITEL PE-2000 from Goodyear Tire and Rubber Company. The instant specification identifies the polycarbonate resin associated with the trademark MAKROLON 5707 as a bisphenol A polycarbonate resin, i.e., poly(4,4'-isopropylidene-diphenylene carbonate. Instant specification, paragraph 0078, lines 9-10. The polycarbonate resin associated with MAKROLON 5707 meets the film forming binder limitations recited in instant claims 5-7. Yu'309 identifies the polyester resin associated with the trademark VITEL PE-200 as a copolyester adhesion promoter. Yu'309, col. 12, lines 41-45. The polyester resin associated with the

trademark VITEL PE-200 in the Yu'486 anti-curling layer is present in an amount of 8.7 wt% based on the weight of the polycarbonate film forming resin associated with the trademark MAKROLON 5707. The amount of 8.7 wt% based on the weight of film forming polymer is within the amount ranges recited in instant claims 10 and 11. The amount of 8.7 wt% was determined by the information provided in example IV in Yu'486. The polyester resin associated with the trademark VITEL PE-200 in the Yu'486 anti-curling layer meets the adhesion promoter limitations recited in instant claims 8-11. The Yu'486 amount of the conductive polymer dispersion of 23 wt% based on the weight of the total solids in the anti-curling layer is within the amount range recited in instant claim 2. The Yu'486 amount of 23 wt% is within the ranges of "about 5 to about 20 percent by weight" and of "about 6 to about 10 percent by weight" of total solids recited in instant claims 3 and 4, respectively. The term "about" admits variation. There is no disclosure in the instant specification of critical properties that exclude the Yu'486 amount of 23 wt% from the upper limit amounts, "about 20 weight percent" and "about 10 weight percent," of the amount ranges recited in instant claims 3 and 4. Thus, the Yu'486 amount of 23 wt% of the conductive polymer in the Yu'486 anti-

curl layer is within the ranges recited in instant claims 3 and 4.

According to Yu'486, a photoreceptor comprising its conductive anti-curl layer "maintains conductivity for longer periods of time to prevent electrostatic charge build-up during imaging belt machine operations." Col. 6, lines 28-33. The conductive anti-curl backing layer produces "no negative adhesion effect." Col. 20, lines 50-54.

Yu'486 does not exemplify an anti-curl layer comprising a lignin sulfonic acid doped polyaniline dispersion as recited in the instant claims. The conductive polymer dispersion in the exemplified Yu'486 anti-curl layer in example IV is a conductive acid-doped polyaniline dispersion. Col. 14, lines 57-58, and reference claim 1. Yu'489 teaches that "any suitable acid may be utilized for doping aniline," for example, "sulfuric acid . . . methane sulfonic acid . . . and the like." Col. 15, lines 24-27.

Service discloses conductive polymer films comprising a lignosulfonic acid doped polyaniline dispersed in the polymer film. Service, col. 2, lines 14-18 and 24-27; Application'171, page 2, line 34, to page 3, line 2, and page 3, lines 9-11. According to Service, lignosulfonates are byproducts of the paper making industry and are environmentally safe and

inexpensive. The lignosulfonic acid improves the solubility of the conjugated π-system, polyaniline. Service, col. 1, lines 23-26; Application'171, page 1, lines 20-22. Viswanathan teaches that the lignosulfonates comprise multiple sulfonic acid groups that can be used for doping polymers. Col. 5, lines 20-22.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Service and Viswanathan, to use a lignosulfonic acid as the acid dopant in the conductive acid doped polyamide resin disclosed by Yu'486 in the anti-curl layer disclosed by Yu'486. That person would have had a reasonable expectation of successfully obtaining a photoreceptive imaging web member comprising a conductive anti-curl backing layer, which comprises an environmentally safe and inexpensive lignosulfonic acid doped polyaniline resin, that has desired properties disclosed by Yu'486.

8. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu'486, as evidenced by applicants' admission I and Yu'309, combined with Service and Viswanathan, as applied to claim 1 above, further combined with Yu'309.

Yu'486, as evidenced by applicants' admission I and Yu'309, combined with Service and Viswanathan, renders obvious an

electrophotographic photoreceptive imaging web member as described in paragraph 7 above, which is incorporated herein by reference.

Yu'486 does not exemplify an anti-curl layer comprising a filler as recited in instant claims 12-14.

Yu'309 teaches anti-curl backing layers comprising organic fillers. The organic fillers include fluorocarbon polymers, such as irregularly shaped polytetrafluoroethylene (PTFE) particles, or irregularly shaped polyethylene wax particles. Col. 13, line 42, to col. 14, line 6, and examples III and VI. The irregularly shaped PTFE particles or polyethylene wax particles meet the filler limitations recited in instant claims 12-14. According to Yu'309, the organic fillers have "inherently wear-resisting characteristics and are capable of providing lubricity to ease the sliding mechanical interaction at the anti-curl layer surface." Col. 13, lines 34-38. The anti-curl backing layer has improved wear resistance and increased durability and exhibits greater resistance to layer de-lamination. Col. 3, lines 18-19 and 24-36.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Yu'309, to incorporate an organic filler, such as irregularly shaped PTFE particles or polyethylene wax particles, as taught by Yu'309 in

the anti-curl layer rendered obvious over the teachings of Yu'486, as evidenced by applicants' admission I and Yu'309, combined with the teachings of Service and Viswanathan, and to use the resultant anti-curl layer in the photoreceptive member disclosed by Yu'486. That person would have had a reasonable expectation of successfully obtaining a photoreceptive image web member that comprises an anti-curl layer that has improved wear resistance and increased durability and exhibits greater resistance to layer de-lamination.

9. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu'486, as evidenced by applicants' admission I and Yu'309, combined with Service and Viswanathan, as applied to claim 1, further combined with US 5,737,669 (Ring) and Diamond, Handbook of Imaging Materials, pages 395-396 (Diamond).

Yu'486, as evidenced by applicants' admission I and Yu'309, combined with Service and Viswanathan, renders obvious an electrophotographic photoreceptive imaging web member as described in paragraph 7 above, which is incorporated herein by reference.

Yu'486 does not exemplify an image forming apparatus as recited in instant claims 19 and 20.

As shown in Diamond, it is well-known in the art that an image loop (i.e., an endless belt) can be fabricated from a flexible web comprising a conductive layer and a photoreceptor layer where the ends of the web are joined together to form an endless belt. Diamond, page 396, lines 4-5.

According to Ring, a laser or LED-array printer comprising a photoreceptive image-carrying drum has several disadvantages. See Ring, col. 1, line 36, to col. 2, line 9. For example, Ring teaches that "the drum . . . and the . . . [other] elements positioned adjacent the drum surface are relatively large elements since they all must be at least as wide as a sheet of a printing medium, on the order of 8.5 to 12 inches or larger." Col. 1, lines 37-42. Ring also discloses that "if an LED-array head is employed . . . the head must be at least as wide as the drum . . . so that an electrostatic image is formed on the drum surface during a single pass of the drum." Ring discloses that "if a laser is employed, relatively sophisticated mirrors and/or prisms must be employed for the same purpose." The "relatively long LED-array head or the lasers and related optical devices represent a significant portion of the cost of producing the drum printer." Col. 1, lines 46-55. To overcome these disadvantages, Ring discloses a small-scale and inexpensive electrophotographic printer comprising a photoreceptive member

in the form of an endless belt **20** stretched over rollers **26a** and **26b**. Fig. 2; col. 4, lines 20-36; and col. 4, line 50, to col. 5, line 52. According to Ring, its electrophotographic printer requires a relatively short LED array and can form multichrome or color images at a relatively low cost. Col. 9, lines 39-45. The apparatus disclosed by Ring further comprises a charging device **34**, a developing unit **38**, a transfer mechanism **46** that transfers the toner image from the photoreceptive member to the printing medium **12**, and a fixing mechanism **48** to fix the transferred toner image to the printing medium **12**. Figs. 2 and 3; col. 4, lines 58-60; col. 6, lines 12-20; and col. 6, line 66, to col. 7, line 6.

It would have been obvious to a person having ordinary skill in the art, in view of teachings of Diamond and Ring, to form an endless flexible belt from the photoreceptive imaging web member rendered obvious over the teachings of Yu'486, as evidenced by applicants' admission I and Yu'309, combined with the teachings of Service and Viswanathan, as taught by Diamond. It would also have been obvious for that person to use the resultant photoreceptive flexible belt in the electrophotographic printer taught by Ring. That person would have had a reasonable expectation of successfully obtaining a

small-scale electrophotographic printer that is capable of providing multichrome and color images at a relatively low cost.

10. Applicants' arguments filed on Feb. 28, 2006, regarding the rejections set forth in paragraphs 7-9 above have been fully considered but they are not persuasive.

Applicants state that they "are not sure what is meant by 'Applicants [sic] admissions in paragraph 78' and how the . . . specification recitations are related to the outstanding rejection."

In paragraph 7 above, the rejection uses applicants' admissions in paragraph 0078 of the instant specification as a dictionary to identify the chemical composition of the polycarbonate resin associated with the trademark MAKROLON 5707 used in the anti-curl layer of Yu'486. See the rejection in paragraph 7 above, page 6, lines 12-20. The instant specification identifies the polycarbonate resin associated with the trademark MAKROLON 5707 as a bisphenol A polycarbonate resin, i.e., poly(4,4'-isopropylidene-diphenylene carbonate).

Applicants assert that one of ordinary skill in the art would not have been motivated to use ligninosulfonic acid doped materials taught by Service and Viswanathan to replace the polyaniline in the Yu'486 anti-curl layer and to replace the

organic filler in the Yu'309 anti-curl layer. Applicants assert that Viswanathan and Service are not in the same field of endeavor as Yu'486 and Yu'309. Applicants argue that Yu'486 and Yu'309 are related to photoreceptors, while Service teaches that Ligno-PANI can be used to inhibit corrosion on architectural structures and as a self-supporting conductive polymer film in semiconductors and Viswanathan uses the sulfonated lignin to shield electromagnetic radiation. Applicants further assert that there is no teaching in any of the cited references "that materials suitable in shielding electromagnetic radiation or in semiconductors can be useful in reducing the build-up of static charge or debris on a photoconductor, or to prevent cracking," which are the advantages taught by applicants.

Applicants' assertions are not persuasive. Applicants' comments regarding Yu'309 are misplaced. With respect to the rejections in paragraphs 7 and 9 above, Yu'309 is only cited as a dictionary to identify the chemical composition of the polyester resin associated with the trademark VITEL PE-200 in the Yu'486 anti-curl layer. Yu'309 identifies that polyester resin as a copolyester adhesion promoter. See the rejection in paragraph 7 above, page 6, lines 20-24. The rejections in paragraphs 7 and 9 do not suggest replacing in the organic fillers of Yu'309 with the lignin sulfonic acid doped materials

disclosed by Service and Viswanathan as asserted by applicants. With respect to the rejection in paragraph 8 above, Yu'309 is further cited to show that the use of fillers as recited in instant claims 12-14 in anti-curl layers and benefits of using said fillers, for example, to improve the wear resistance, durability, the resistance to de-lamination of the anti-curl layer, are known in the art. The rejection in paragraph 8 does not suggest replacing the organic fillers in Yu'309 with the lignin sulfonic acid doped materials disclosed by Service and Viswanathan, as asserted by applicants.

As discussed in the rejection in paragraphs 7 and 9 above, Yu'486 teaches a photoreceptor comprising an anti-curl layer that meets the imaging member compositional limitations recited in instant claims 1-11 and 17-20, but for the lignin sulfonic acid doped polyaniline recited in the instant claims. The Yu'486 anti-curl layer comprises a conductive acid-doped polyaniline dispersion. As discussed in paragraph 7 above, Yu'489 teaches that "any suitable acid may be utilized for doping aniline," for example, "sulfuric acid . . . methane sulfonic acid . . . and the like." As discussed in paragraph 7 above, Yu'486 teaches that its anti-curl layer is conductive and prevents electrostatic charge build-up. In other words, Yu'486 teaches that its anti-curl layer reduces the build-up of static

charges, one of the benefits sought by applicants. Thus, Yu'486 teaches an anti-curl layer, which comprises an acid doped polyaniline, that prevents or reduces electrostatic charge build-up.

As discussed in paragraph 7 above, Service teaches conductive polymer films comprising lignosulfonic acid doped polyaniline dispersed in a polymer film. Viswanathan is cited to show that lignosulfonates comprise multiple sulfonic acid groups that can be used for doping polymers. Furthermore, Viswanathan also states that a lignosulfonic acid doped polyaniline is also well known as a conducting material. Col. 1, lines 18-29. Thus, both references teach that lignosulfonic acid doped polyanilines are well known as conductive polyanilines. Although both Service and Viswanathan do not disclose that the lignosulfonic acid doped polyaniline can be used in the anti-curl layers of photoreceptors, both references address the concerns of Yu'486, a conductive acid doped polyaniline. Moreover, as discussed in paragraph 7 above, Service teaches that lignosulfonates are environmentally safe and inexpensive and that lignosulfonic acid improves the solubility of the conjugated π-system, polyaniline. Thus, Service provides motivation, suggestion, and reason to a person having ordinary skill in the art to use lignosulfonic acid as

the acid dopant in the conductive polyaniline taught by Yu'486. There are two separate tests for determining whether prior art is analogous: (1) whether the art is from the same field of endeavor, regardless of the problem addressed; and (2) if the reference is not within the field of the inventor's endeavor, whether the reference is reasonably pertinent to the particular problem with which the inventor is involved. In re Clay, 23 USPQ2d 1058, 1060 (Fed. Cir. 1992). Here, Yu'486, Service, and Viswanathan satisfy the second test because the references are concerned with conductive acid doped polyaniline. Accordingly, for the reasons discussed above and in the rejections above, the references provide motivation, suggestion, and reason to use lignosulfonic acid as the acid dopant in the conductive polyaniline dispersion taught by Yu'486 in the Yu'486 anti-curl layer.

Moreover, although the references do not teach or suggest that the incorporation of lignosulfonic acid doped polyaniline prevents premature cracking of the anti-curl layer as taught by applicants, the reasons for combining the references do not have to be those of applicants. As discussed above, the references provide motivation, suggestion, and reason to use lignosulfonic acid as the acid dopant in the conductive polyaniline dispersion taught by Yu'486 in the Yu'486 anti-curl layer. Thus, for the

reasons discussed in the rejections above, the combined teachings of the prior art render obvious the imaging member recited in the instant claims. Accordingly, the rejections stand.

11. Claims 15 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Yu'486 teaches that its anti-curl layer has a bulk resistivity of "less than 10^8 ohm-cm," preferably "less than about 10^5 ohm-cm." Col. 17, lines 10-13. Yu'486 does not disclose that its anti-curl layer has a surface resistivity of "about 10^8 to about 10^{14} ohms/sq" or "about 10^8 to about 10^{13} ohms/sq," as recited in instant claims 15 and 16, respectively. Nor is there enough information in Yu'486 for a person having ordinary skill in the art to reasonably presume that the Yu'486 anti-curl layer has a surface resistivity as recited in instant clams 15 and 16.

12. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicants are

reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Nam Nguyen, can be reached on (571) 272-1342. The central fax phone number is (571) 273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLD
May 6, 2006

Janis L. Dote
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GROUP 1500
1700